QA4 (POWERED) OPERATORS MANUAL

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1. Introduction

These instructions are intended to assist you with the operation of the QA4 Day Surgery Stretcher. It is important that these instructions are read thoroughly before using the equipment.

It is also important to check the stretcher before use; ensure that all stretcher functions operate to their full range of movement and that all detachable components disengage, re-engage and lock correctly. We recommend that the stretcher is visually inspected for any loose or damaged parts, foreign objects caught in the castors, and hydraulic fluid leakage.

1.1. Warnings and Cautions

Various warnings and cautions are made throughout these operating instructions.

A **WARNING** is given when the personal safety of the patient or user may be affected and when disregarding this information could result in injury.

A **CAUTION** is given when special instructions must be followed. Disregarding this information could result in permanent damage being caused to the stretcher.

1.2. Scope of Use

This product is intended for use within a day surgery environment for the induction, transport, treatment and recovery of patients.

Due to its extra functionality and higher weight capacity this stretcher is heavier than a conventional patient transfer stretcher and therefore less suitable for this function. In addition the stretcher has very low ground clearance that may cause problems when traversing uneven ground.

CAUTION: The stretcher may be damaged by pushing it across rough or uneven ground.

1.3. Equipment Classification

The stretcher has been classified as a 'Class 1' device.

2. Product Specifications

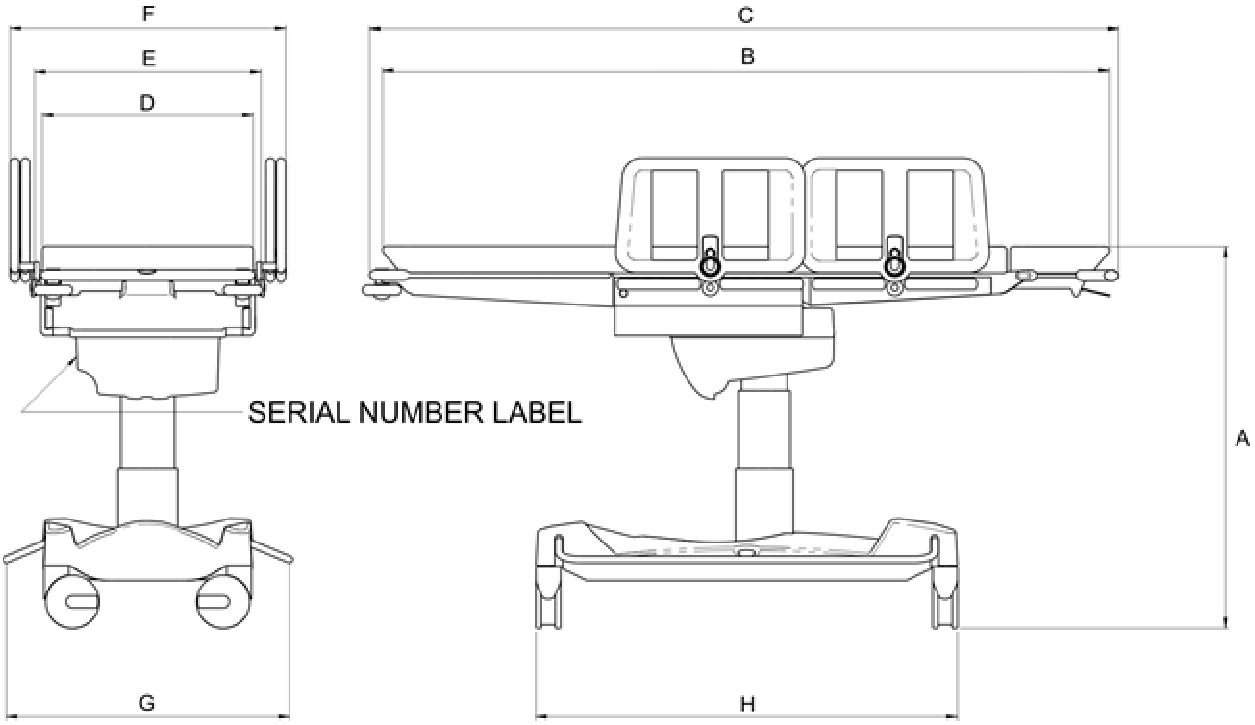


Fig. 1

Key to Fig. 1		
A.	Height (MIN)	23.75″
	Height (MAX)	39.5″
B.	Mattress Length	80.25″
C.	Stretcher Length	82.75″
D.	Mattress Width	23.5″
E.	Stretcher Width (With Side Rails)	25.75″
F.	Stretcher Width (With Sides)	30.25″
G.	Stretcher Width (Brakes Off)	32.75″
H.	Base Length	46.75″
	Mattress Depth	3″
	Trendelenburg	20°
	Reverse Trendelenburg	12°
	Lateral Tilt	+12°/12°
	Backrest Articulation	0°-65°
	Head Section Articulation	+30°/-30°
	Head End Top Slide	9″
	Foot End Top Slide	9″

Weight Limits	
Stretcher	550 lbs.
Head Section	55 lbs.
Leg Section	110 lbs.
Stretcher Weight	350 lbs.
Castor Diameter	6″
Fixed Leg Section (Standard)	
Weight	13.25″
Articulation	N/A
Articulating Leg Section (Optional)	
Weight	17.5 lbs.
Articulation	0° - 45°

3. Product Functions

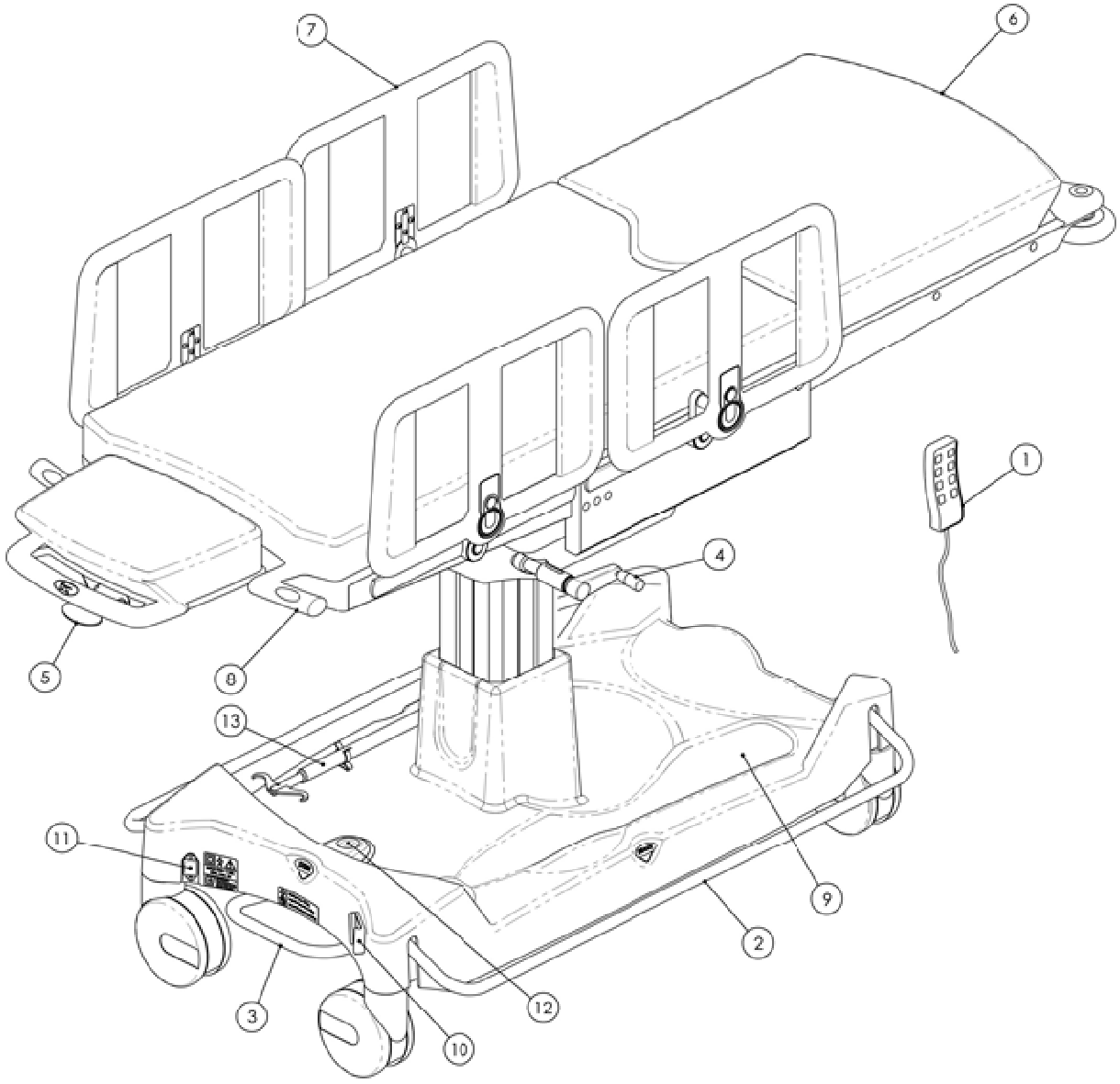


Fig. 2

Key to Fig. 2	
1.	Hand control
2.	Brake Pedals
3.	Steering Pedal
4.	Lateral Tilt Handle
5.	Head Section Tilt Actuation Lever
6.	Removable Leg Section
7.	Stretcher Sides
8.	Pushing Handles
9.	Oxygen Cylinder Mounting Trough
10.	'V' Mounting for Suction Canister
11.	Power Input/Charging Socket
12.	Hand control Socket
13.	I.V. Pole

3.1. Powered Stretcher Functions

The following four stretcher functions are electromechanical in operation and are powered from an on-board battery supply. These functions are operated and controlled through the hand control (Fig. 2, no. 1); the layout of the hand control is shown below.

CAUTION: The battery must be properly maintained in accordance with these instructions. Failure to do so will result in significant loss of charge capacity or failure of the battery. Refer to section 4, 'Battery Charging and Battery Maintenance' for a full explanation on how to care for the battery.

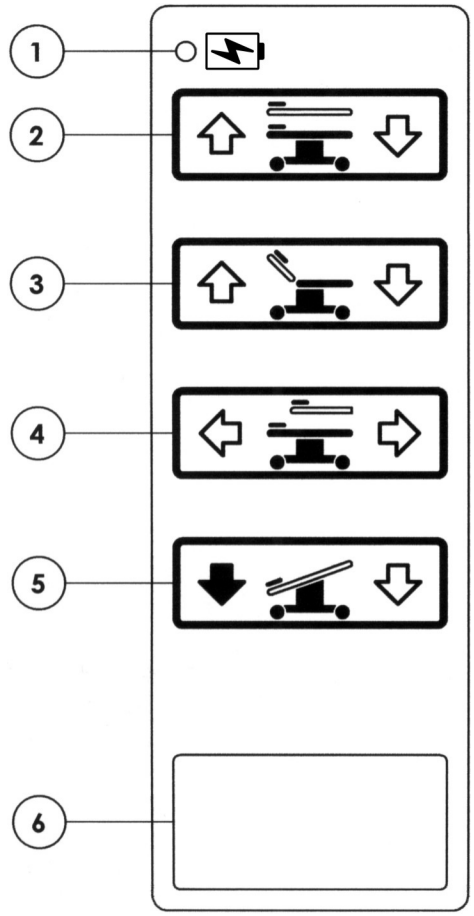


Fig. 3

Key to Fig. 3	
1.	Battery Status LED
2.	Variable Height Functions
3.	Backrest Articulation Functions
4.	Patient Platform Top Slide Functions
5.	Trendelenburg & Reverse Trendelenburg Tilt Functions
6.	Logo

3.1.1. Using the Hand Control

The hand control is externally removable and plugs into the hand control socket on the base of the stretcher at the head end (Fig. 2, no. 12).

NOTE: the manufacturer recommends that a spare hand control is purchased and stored in an accessible location in the event that the hand control becomes damaged.

CAUTION: Because the hand control is in constant use it is particularly vulnerable to wear and tear or damage. Before use it is important to inspect the hand control to ensure there is no damage to the cable or the buttons.

WARNING: In the event of hand control damage the hand control should be replaced immediately or the stretcher removed from service.

WARNING: Hand control damage may lead to malfunction during equipment use. If a hand control button becomes damaged it is possible for one of the powered functions to operate spontaneously. In this unlikely event the following actions should be taken;

1. Depress and hold the opposing function button, i.e. if the backrest is raising press backrest down.
2. Unplug the hand control from the stretcher.
3. Attach a new hand control.
4. If another hand control is not available transfer the patient to another stretcher.

3.1.2. Height Adjustment

The height of the patient platform can be adjusted by using the up and down buttons on the hand control. When either button is depressed the green indicator light on the hand control will illuminate to indicate that the stretcher is powered.

CAUTION: Ensure that there are no obstructions in the way before raising or lowering the patient platform.

CAUTION: Ensure that there is no equipment stored in the base of the stretcher before lowering the patient platform.

3.1.3. Using the Backrest

The backrest can be raised and lowered by using the up and down buttons on the hand control.

CAUTION: Ensure that there are no obstructions in the way before raising or lowering the backrest.

3.1.4. Patient Platform Top Slide ('C' Arm Access)

The patient platform is designed to slide longitudinally, either towards the head end or the leg end, to provide; full 'C' arm access, a gynaecological position, and improved access at the head end. The patient platform is traversed by using the left and right buttons on the hand control.

The mattress and patient platform are made from X-Ray translucent materials. The areas of 'C' arm access are illustrated in Fig. 4, with the stretcher traversed in both directions.

The stretcher should be returned to the 'neutral' position once the procedure has been completed.

Observe that when the patient platform is traversed in either direction the mid section static frame arm is revealed.

In the neutral position the traversing section of the patient platform aligns with the static arm.

NOTE: The patient platform should be returned to the neutral position once the procedure has been completed, see above.

CAUTION: Ensure that there are no obstructions in the way before traversing the patient platform.

CAUTION: With the leg section folded down caution must be exercised traversing the patient platform towards the head end.

CAUTION: When the head section is in the folded away position caution must be exercised when traversing the patient platform. There is a possibility that the head section could clash with other parts of the stretcher which may result in permanent damage being caused to the stretcher.

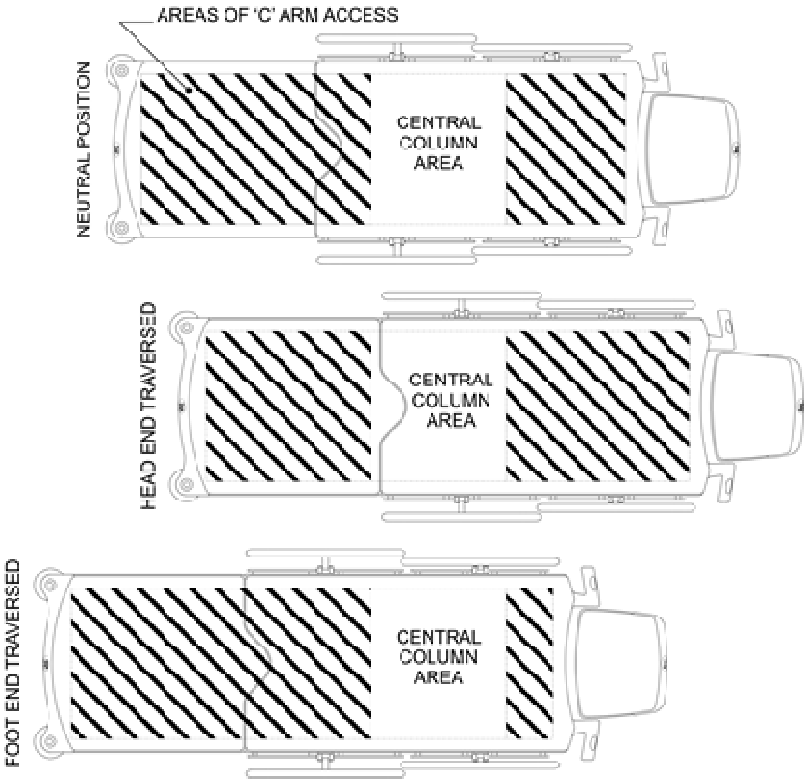


Fig. 4

3.1.5. Using the Trendelenburg Function

The patient platform can be longitudinally tilted to provide a trendelenburg (head down) or reverse trendelenburg (leg down) position by using one of the two down buttons on the hand control.

The head down trendelenburg button is in-filled in red to indicate that this button is used for emergency positioning.

CAUTION: Ensure that there are no obstructions in the way before tilting the patient platform.

CAUTION: Ensure that there is no equipment stored in the base moulding of the stretcher before tilting the patient platform (**NOTE:** This ONLY applies when the stretcher is at its lowest height).

3.2. Manual Stretcher Functions

The following functions are manually operated and are not powered from the on-board battery supply or main power supply.

3.2.1. Using the Brakes

All four castors are locked simultaneously by depressing either of the brake pedals (Fig. 2, no.2) at any point along the length of the pedal. The brakes are disengaged by lifting either pedal.

3.2.2. Using the Steering Pedal

The stretcher can be manoeuvred more easily by engaging the steering mechanism. The mechanism is engaged by pressing the steering pedal (Fig. 2, no. 3) and disengaged by lifting the pedal.

⚠ **CAUTION:** Applying the steering pedal with excessive force, i.e. by standing on the pedal, will cause permanent damage to the mechanism.

⚠ **CAUTION:** The steering pedal is designed to disengage automatically when the stretcher is pushed *leg first* over an obstruction. Attempting to prevent this will cause damage to the mechanism. The 5th wheel should be allowed to disengage and then can be reengaged after the obstruction.

⚠ **CAUTION:** The steering wheel must be disengaged manually when the stretcher is pushed *head first* over an obstruction, i.e. an elevator threshold, or damage may occur.

3.2.3. Using Lateral Tilt

Lateral tilt is achieved by rotating the lateral tilt handle (Fig. 2, no. 4) either clockwise or counter-clockwise.

To use the lateral tilt handle; extend the handle by pulling it away from the stretcher, and unfold the crank handle until it locks into position. Return the handle to its stored position when not in use.

⚠ **CAUTION:** The lateral tilt handle must be stored away to ensure that the handle does not get damaged.

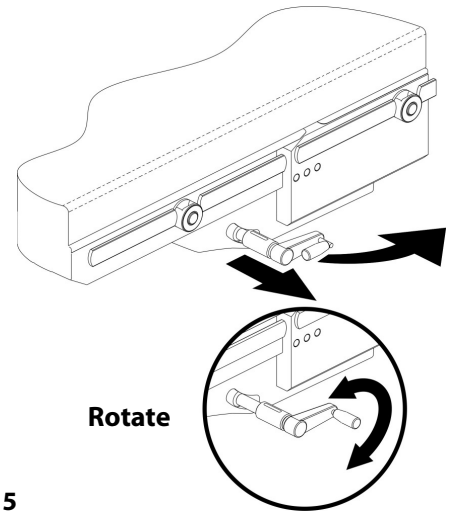


Fig. 5

3.2.4. Using the Head Section

The head section is articulated by simply pulling up on the head section tilt actuation lever.

The head section is also designed to be removed for specific procedures; i.e. gynaecology and urology to give greater anaesthetist access to the patient. Removing the head section prior to administering anaesthetic reduces the length of the backrest and the need to reposition the patient in surgery. Removing the head section also gives greater access to the patient from the head end for staff.

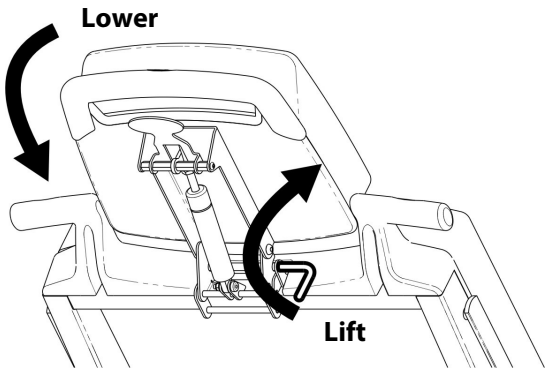


Fig. 6

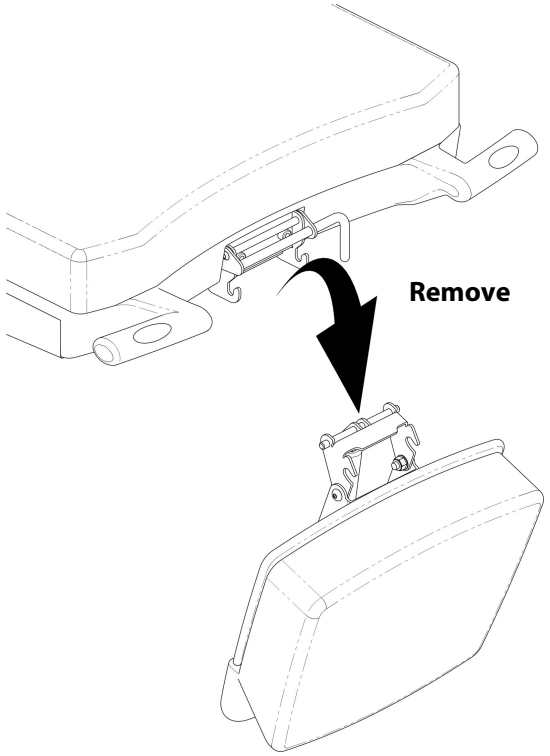


Fig. 7

The head section is removed by lifting the release handle, then lowering and removing the head section from the support bracket.

WARNING: When the head section is attached to the stretcher ensure that the head section is fully engaged and securely locked in position.

3.2.5. Using the Leg Section

The stretcher comes standard with a non-articulating lightweight leg section (Fig. 2, no. 6), if the stretcher has an articulating leg section installed, refer to section 3.2.5.3.

3.2.5.1. Removing the Leg Section

Depress both buttons as shown (one button is located on each side of the stretcher) and remove the leg section.

WARNING: Ensure that any persons responsible for removing the leg section adopt good posture and stance, in accordance with the relevant 'Moving and Handling' policies, to prevent injury to the user.

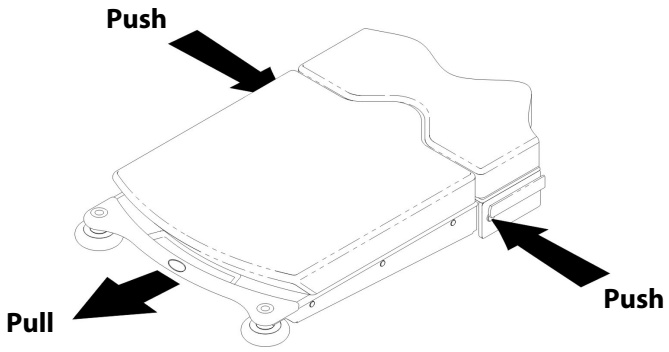


Fig. 8

3.2.5.2. Replacing the Leg Section

Engage the locating spigots of the leg section as shown and push firmly until the leg section is fully engaged.

WARNING: Ensure that the leg section is fully engaged and securely locked in position.

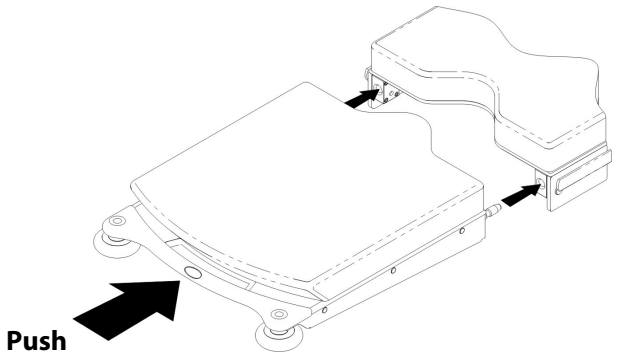


Fig. 9

3.2.5.3. Articulating Leg Section

To articulate the leg section pull up on the leg frame lever and push down on the board. To remove the leg section refer to section 3.2.5.1.

NOTE: The articulating leg section is an *optional* accessory for this stretcher.

CAUTION: With the leg section articulated down caution must be exercised when tilting the stretcher leg down, i.e. a reverse trendelenburg position.

NOTE: With the articulating leg section, the leg section should be articulated down to the maximum angle before being removed. This shortens the distance between the end of the leg section and the mounting sockets. This does two things; one, it provides better access to the release buttons, and two, it reduces the distance that the user has to reach to support the weight of the articulating leg section.

NOTE: When replacing the articulating leg section pull the actuation handle to operate the gas struts and allow the location spigots to achieve a horizontal position.

3.2.6. Using the Stretcher Sides

The stretcher comes standard with four stretcher sides (Fig. 2, no. 7) that can be individually removed from the stretcher or rotated through 180 degrees.

Each side is mounted into a fixed socket that is labelled with a position number, (1) - (4), this corresponds with the numbered label on the stretcher side and ensures that each stretcher side is correctly positioned.

See the following sections for more information on rotating, removing and replacing the stretcher sides.

3.2.6.1. Rotating the Stretcher Sides

Depress the button as indicated, see Fig.10, and rotate the stretcher side, the side will automatically relock in the next position.

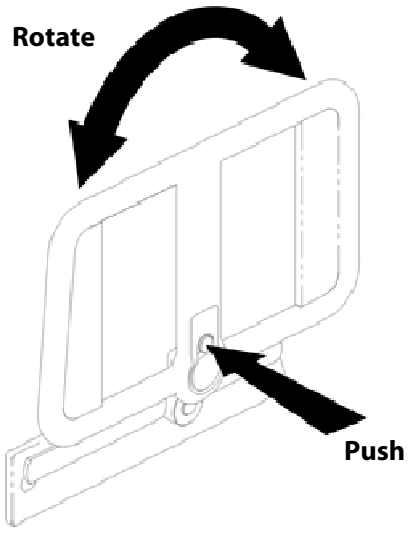


Fig. 10

3.2.6.2. Removing the Stretcher Sides

Ensure the stretchers side is in the 'up' position, depress the button as indicated, see Fig. 11, and remove the stretcher side.

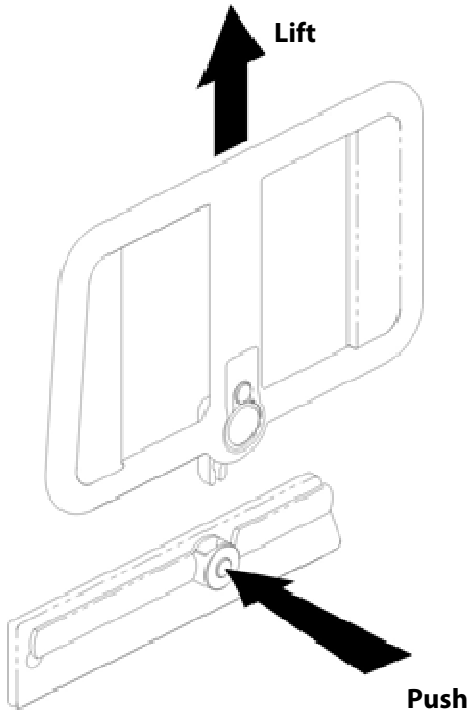


Fig. 11

3.2.6.3. Replacing the Stretcher Sides

Align the stem of the stretcher side to the socket and let the stretcher side drop into position, the stretcher side will automatically lock in position when replaced.

CAUTION: Ensure that the stretchers sides are located into their respective numbered sockets to prevent the stretcher sides clashing.

3.2.6.4. Attaching the Full Length Stretcher Side

The optional full length stretcher side attaches to the stretcher by hooking onto the side bar. To secure the stretcher side, rotate the locking clamp handle 90° in either direction, shown in Fig.13

WARNING: Failure to secure the stretcher side to the side bar using the locking clamp could result in injury to the patient.

Fig. 12

Fig. 13

3.2.6.5. Rotating the Full Length Stretcher Side

When the stretcher side is secured to the stretcher, as shown in Fig. 13, pull the handle in the up direction as indicated in Fig. 14 and rotate the stretcher side away from the stretcher into the down position. The stretcher side will automatically relock in the down position.

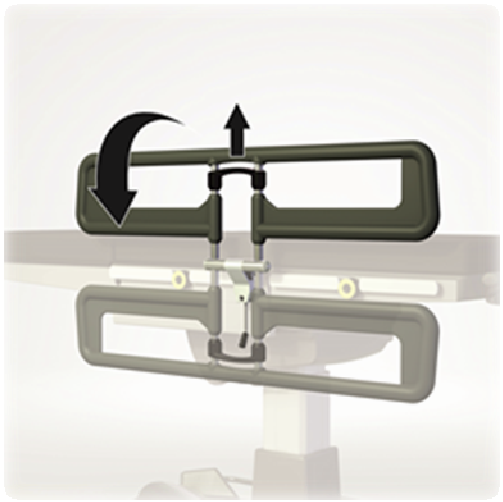


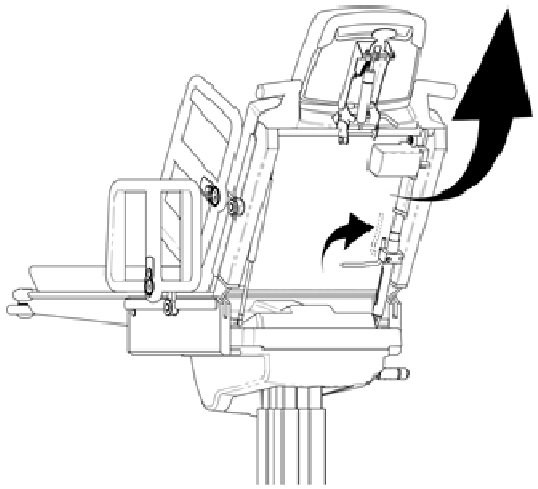
Fig. 14

3.2.7. Using the Emergency Backrest Release Function

The emergency backrest release handle allows the backrest to be dropped immediately from any articulated angle to the horizontal position.

When the emergency backrest release handle is disengaged the backrest will *not* function; the backrest handle must be engaged for correct backrest operation.

NOTE: It is important that staff are clearly informed as to the location of the emergency release handle, its function, and its mode of operation.



3.2.7.1. Releasing the Emergency Backrest Handle

Grasp the emergency release handle and rotate the handle counter-clockwise. As the handle is released the backrest will be unsupported and will drop to the horizontal position.

WARNING: Caution is required when releasing the emergency backrest handle. Once the handle is released the backrest will fall without resistance, ensure no persons are stood behind or under the backrest when the handle is released.

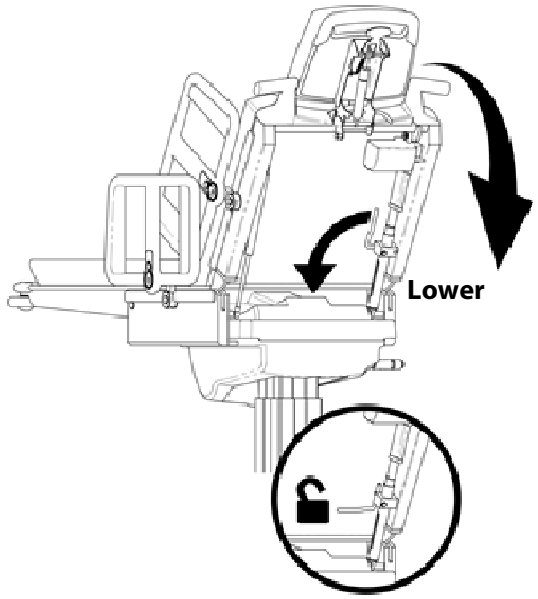


Fig. 15

3.2.7.2. Reengaging the Emergency Backrest Handle

Manually lift the backrest until it stops. Grasp the emergency release handle and rotate the handle 90 degrees clockwise until the handle 'clicks' into position and physically stops. The release handle is now reengaged enabling the backrest to be operated from the hand control.

WARNING: Ensure that the handle is properly reengaged. Failure to do so will result in the backrest not functioning correctly and possibly disengaging unexpectedly.

3.2.8. Using the I.V. Pole

The stretcher comes standard with a loose I.V. pole that can be attached at any point along the side bar and secured using the hand-wheel.

To adjust the height of the I.V. pole, as illustrated in Fig. 16; grasp the locking mechanism (A) and using your thumb, lift the mechanism to release the lock and move the pole up or down to the required height (B); release the mechanism to lock the pole in position.

CAUTION: When adjusting the height of the pole use two hands; one to adjust the height of the inner pole and hooks, and the other to hold the outer pole to ensure that it remains fully engaged in the mounting socket.

The I.V. pole is fitted with two spring-loaded hooks that are designed to return to their original upright position when not in use. Swivel one or both hooks outwards (C) to hang the I.V. bags.

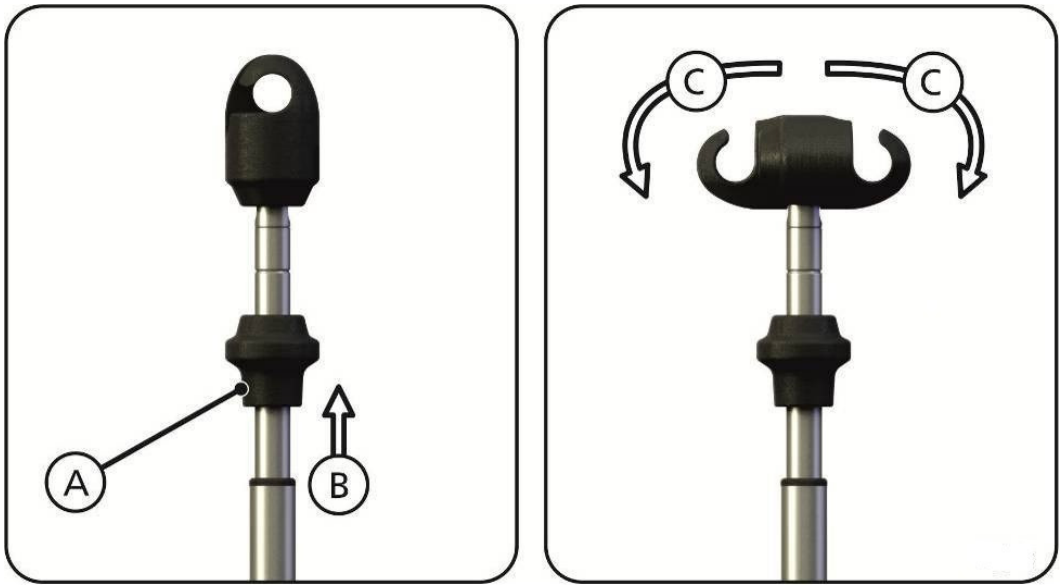


Fig. 16

4. Battery Charging and Battery Maintenance

As with all products that use a rechargeable battery, the battery will require recharging at regular intervals. The frequency with which the battery requires recharging is dependant on the battery usage and the state of charge.

If the stretcher is going to be placed in storage the stretcher must be charged for eight hours every two weeks. Failure to do so will result in permanent battery damage.

CAUTION: Only batteries supplied and approved by Meditek should be used.

CAUTION: The battery unit should not be opened.

CAUTION: Use the battery only for its intended purpose.

CAUTION: Never use a battery that is damaged.

CAUTION: The battery must be recycled, properly disposed of or returned to Meditek. The battery must not be discarded with general waste.

4.1. Power Cord

The stretcher is supplied with an IEC power cord which is used to charge the on-board battery.

WARNING: Only use the power cord supplied with the stretcher for charging purposes. Do not use the power cord for any other purposes.

WARNING: Visually inspect the power cord for damage on a daily basis. Do not use the power cord if damaged in any way.

4.2. Charging

The power cord should be plugged into an electrical socket and the appliance connector end plugged into the charging socket on the stretcher (Fig. 2, no. 11). The socket should now be switched on.

Once the power cord is connected, the control unit will check the charge capacity of the battery before commencing charging, this may take up to 12 minutes. Once this test is complete the battery will either; begin to charge and the battery status LED on the hand control will flash 'green', or the battery status LED will turn solid 'green' to indicate that the battery is fully charged.

From empty, the battery will take approximately 8 hours to fully charge. Plugging the stretcher in for a short period of time will only partially recharge the battery.

The stretcher can be left on charge permanently as there is no danger that the battery can be over charged. The control unit manages the status of the battery charge, switching the charging circuit off when the battery is full and back on when the charge dissipates below a pre-set level.

4.3. Low Battery Alarm

When the battery charge is low the control unit will emit a continuous 'beeping' tone when any one of the function buttons is being depressed, and the hand control battery status LED will turn 'amber'. This indicates that the battery must be recharged; failure to do so will result in the deep discharge protection being enabled.

CAUTION: Failure to charge the battery once the low battery alarm has sounded could result in a permanent loss of maximum charge capacity.

4.4. Manufacturers Recommendation

We recommend that the battery is put on charge *whenever* the stretcher is not in use, including overnight. Establishing this routine will ensure that the stretcher does not run out of charge in the course of a day.

4.5. Battery Deep Discharge

If the battery has not been charged and the stretcher is continuously used, the battery will run flat and eventually reach a 'deep discharge' condition. A normal 8 hour charging period will not be sufficient to recover the battery. The battery will need to be on charge for approximately 72 hours to fully recover.

5. Patient Weight Limits

1. **Main Body:** The stretcher is designed to accommodate a maximum patient weight of 550 lbs. Patients should mount the stretcher at the centre of the patient platform and their weight kept as evenly distributed as possible whilst on the stretcher.
2. **Head Section:** The head section is designed to take a maximum weight of 55 lbs.
3. **Leg Section:** The leg section is designed to take a maximum weight of 110 lbs.

WARNING: Exceeding any of the maximum specified weight limits could result in failure of the stretcher and injury to the patient and staff.

6. K8 Pressure Care Mattress

Understanding the needs for greatest possible patient pressure area care, the mattress is manufactured using the most up to date materials and manufacturing methods available. They consist of:

1. **Body Mould Visco Foam:** Through its sensitivity to temperature this gel feel foam actually moulds to the patient's body, relieving pressure by distributing the load as evenly as possible.
2. **Flexi-Fabric:** A polyurethane water resistant vapour permeable outer cover with the properties of Lycra ensures maximum effect of the body mould foams.
3. **Pressure Care Properties:** The effective pressure care properties of the mattress will decline below satisfactory levels after 4 years at which time we recommend the mattress be replaced.

NOTE: An independent pressure care report produced by Salford University is available upon request.

6.1. Infection Control

Ultrasonic welding of materials creates an impervious seal ensuring an ideal product for infection control.

Each mattress part is attached to the patient platform with Velcro®; this enables the mattress sections to be removed from the stretcher for cleaning and replacement.

NOTE: The mattress parts should be visibly inspected for damage on a daily basis. If the outer mattress fabric is torn then fluids will penetrate and the mattress should be replaced. Do not attempt to repair tears or splits with self adhesive tapes.

7. Cleaning and Disinfecting the Stretcher

7.1. Cleaning

The stretcher should be wiped over thoroughly after each use with warm water and neutral detergent and then wiped dry using a soft cloth; adequate drying is crucial in the care and maintenance of this product.

7.2. Disinfecting

The stretcher should be wiped over thoroughly with warm water and disinfectant; diluted chlorine or alcohol based solutions are suitable for this purpose as is a 1% solution of sodium hyperchloride. Always ensure that the disinfectant manufacturer's guidelines are followed.

Following disinfection, wipe the stretcher thoroughly with warm water and dry with a soft cloth. This is very important as adequate drying is crucial in the maintenance of this product.

CAUTION: Do not use; strong bleaching disinfectant solutions, organic solvents, abrasive powders or expose materials to excessive heat.

8. Product Maintenance

It is recommended that the stretcher is serviced on an annual basis in accordance with the manufacturer's service schedule. For details of extended warranties and service programmes please contact Meditek.

Before use, ensure all stretcher functions operate to their full range of movement and that all detachable components disengage, re-engage and lock correctly.

Because the hand control is in constant use it is particularly vulnerable to wear and tear or damage. Before use it is important to inspect the hand control to ensure there is no damage to the cable or the buttons; see section 3.1.1., 'Using the Hand control', for more information.

NOTE: The manufacturer recommends that a spare hand control is purchased and stored in an accessible location in the event that the hand control becomes damaged.

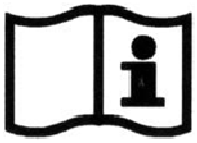
Also, visually inspect the stretcher for any loose or damaged parts, foreign objects caught in the castors, and hydraulic fluid leakage.

9. Identifying Product Labels and Symbols

9.1. Common Symbols

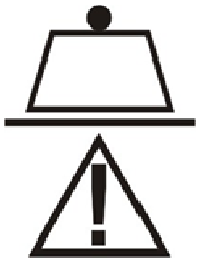
The following symbols are used on labels affixed to the stretcher; read the following text for an explanation as to their specific meanings.

This symbol is an instruction to the reader; its literal meaning is 'Consult Operators Manual', wherein the operating instructions provided with the stretcher will provide further information and clarification.



This symbol is an instruction to the reader but carries more force than the previous symbol, its literal meaning is 'Attention, Consult Accompanying Documents', wherein the operating instructions provided with the stretcher will provide further information and clarification.

This symbol indicates the safe working load of the stretcher and the removable components, i.e. the leg and head sections.



9.2. Steer Label

The steer label indicates the position of the fifth wheel steering mechanism and that depressing the pedal downwards engages the steering mechanism.

9.3. Brake Label

The brake label indicates the position of the brake mechanism and that depressing the brake pedal downwards engages the brakes.

9.4. Leg Section Label

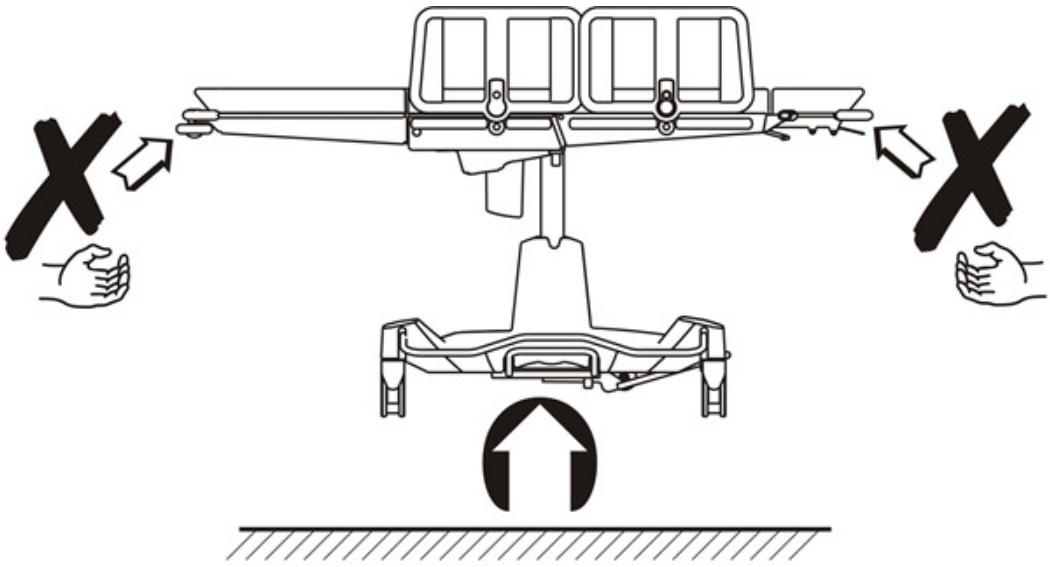
The leg section label indicates that the lightweight leg section can be removed.

9.5. Head Section Label

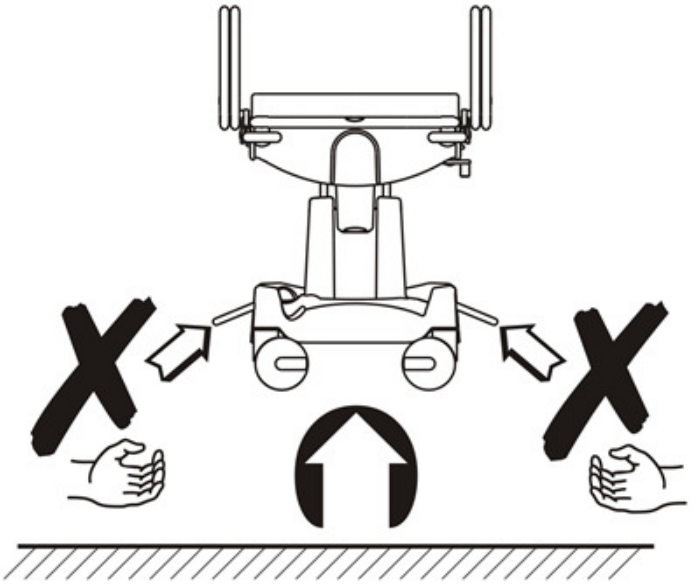
The head section label indicates that the angle of the removable head section can be adjusted.

9.6. Articulating Leg Section Label

The articulating leg section label indicates that the leg section can be articulated and removed.
NOTE: The articulating leg section is an optional accessory for this stretcher.



Do not lift by brake pedals or top,
lift from base frame only.



Important Battery Information

Before Use: The stretcher must be charged for 8 hours.

Storage: The stretcher must be charged for 8 hours every 2 weeks. Failure to do so will result in permanent battery damage.

See section 4, 'Battery Charging & Battery Maintenance', for further instruction.

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